

Washington Update

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Federal Energy Management Program**

April 19, 2018



FEMP's History: *At-a-Glance*

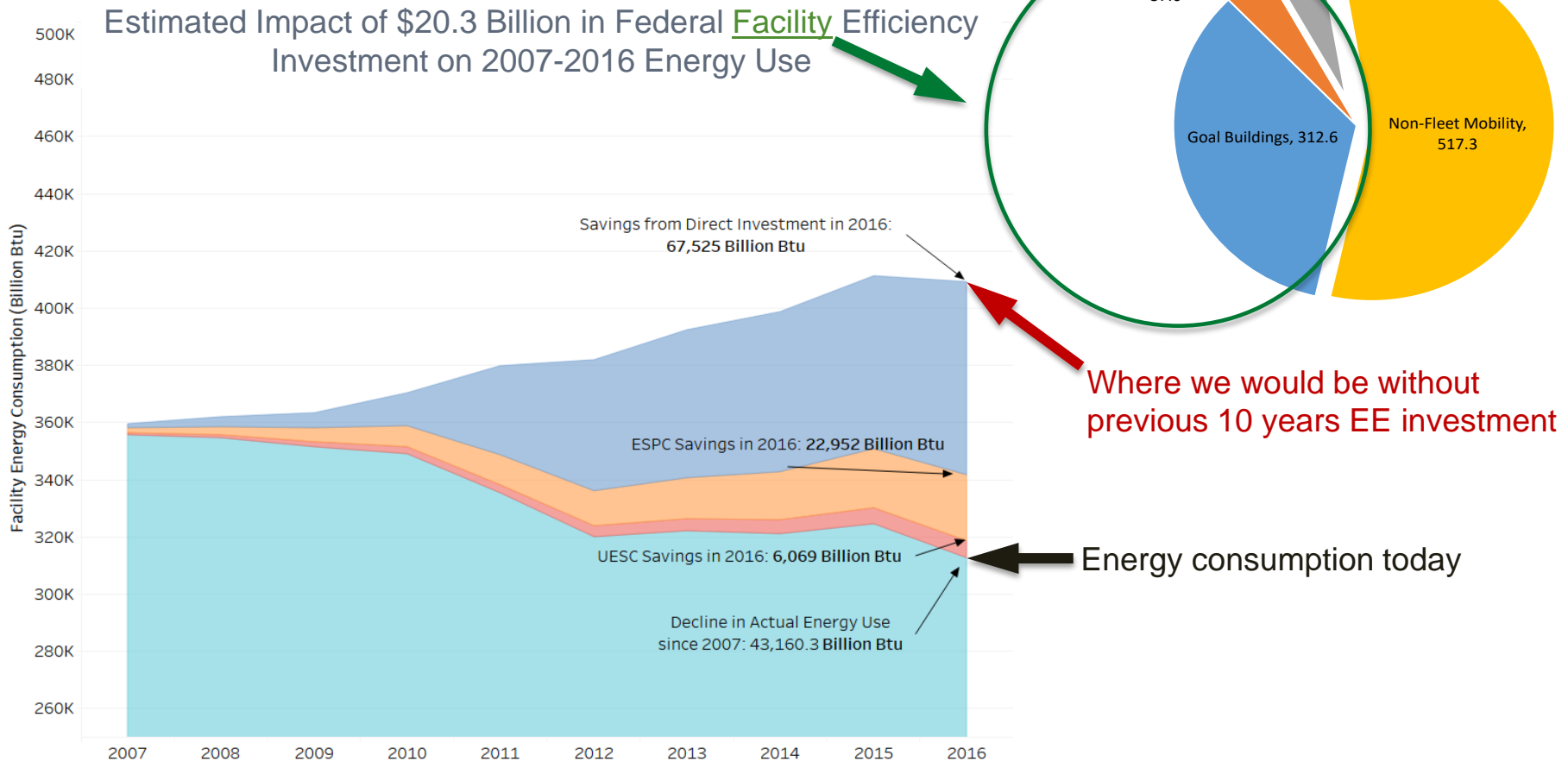
- FEMP was established in 1973 and given authority by Congress in 1978 to encourage effective energy management and reduce federal energy consumption.
- The program catalyzes federal facility and infrastructure improvement, empowering agencies to pursue cost-effective, validated, and replicable energy and water solutions.
- FEMP provides integrated energy management planning and support across federal agencies; leveraging resources and lessons learned, providing training, and engaging in project-driven partnerships with the private sector.



Federal Energy Efficiency: *Accomplishments*

\$2.4* billion of avoided costs in 2016

\$20.3 billion of investment is equivalent to 162,000 job-years



*at cost of electricity

Federal Energy Investments: *The Potential*

While there has been great progress, additional opportunities exist for further energy cost reduction and energy conservation.

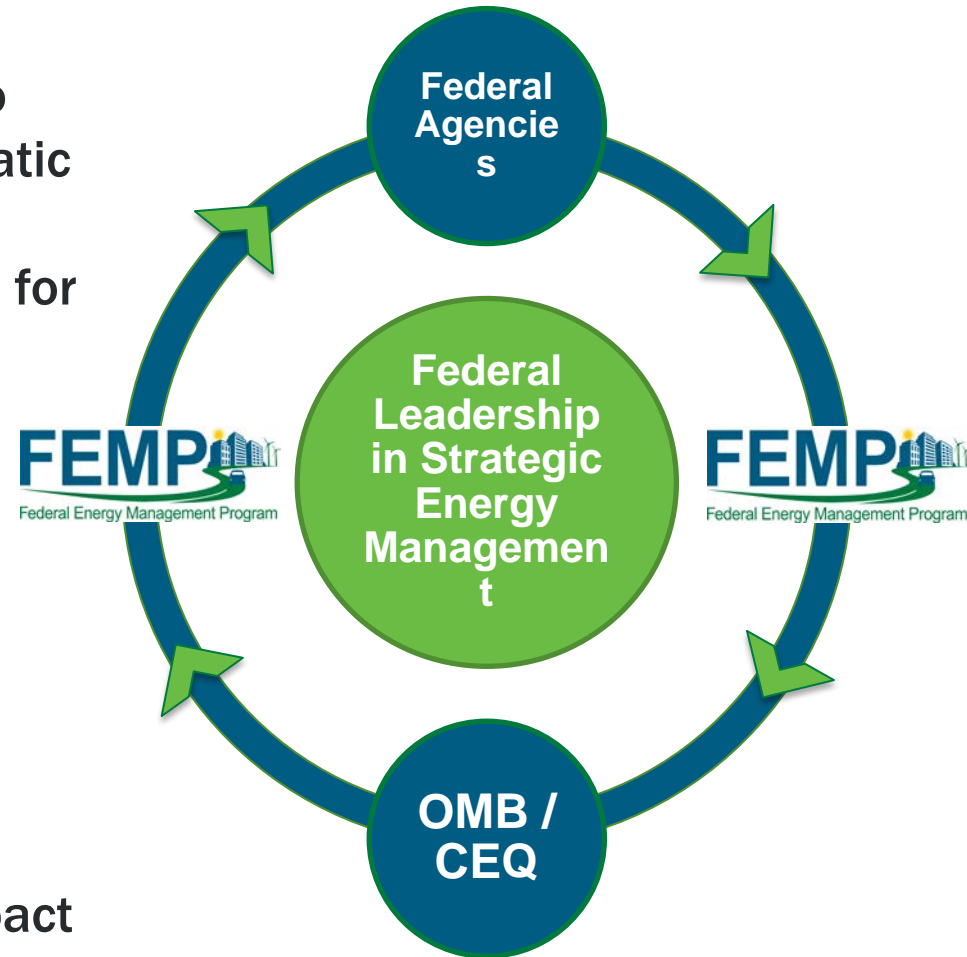
- Between **\$9 billion** and **\$15 billion** of potential self-financing efficiency measures is estimated to exist in Federal buildings.
- The level of deferred maintenance and repairs is also increasing, with approximately **\$165 billion** required to bring government owned property, plant and equipment to an acceptable condition.
- There are even more opportunities for investments through the integration and application of emerging and smart technologies



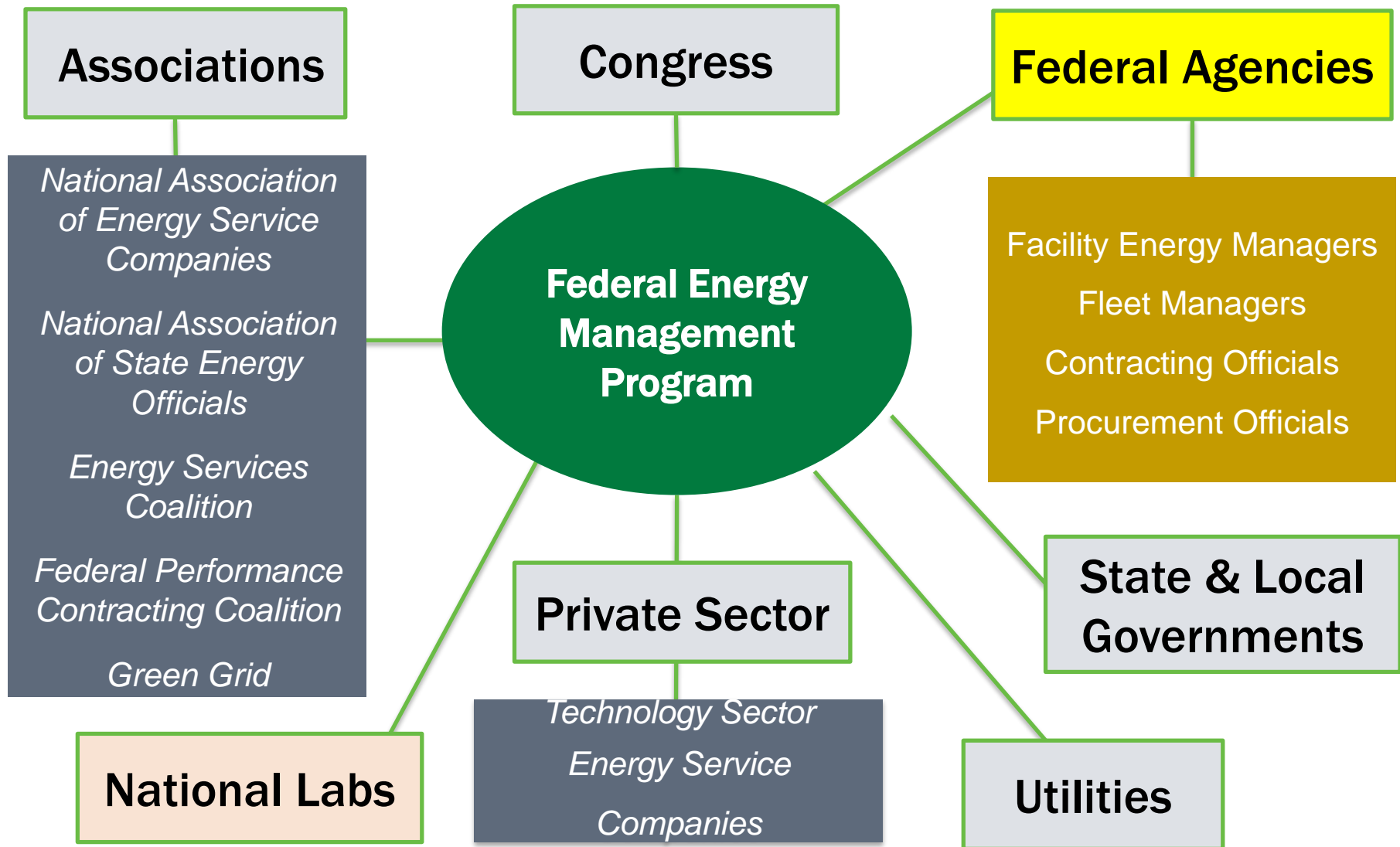
FEMP FY18 Focus: *Mission Focus and Strategy*

FEMP is focusing on

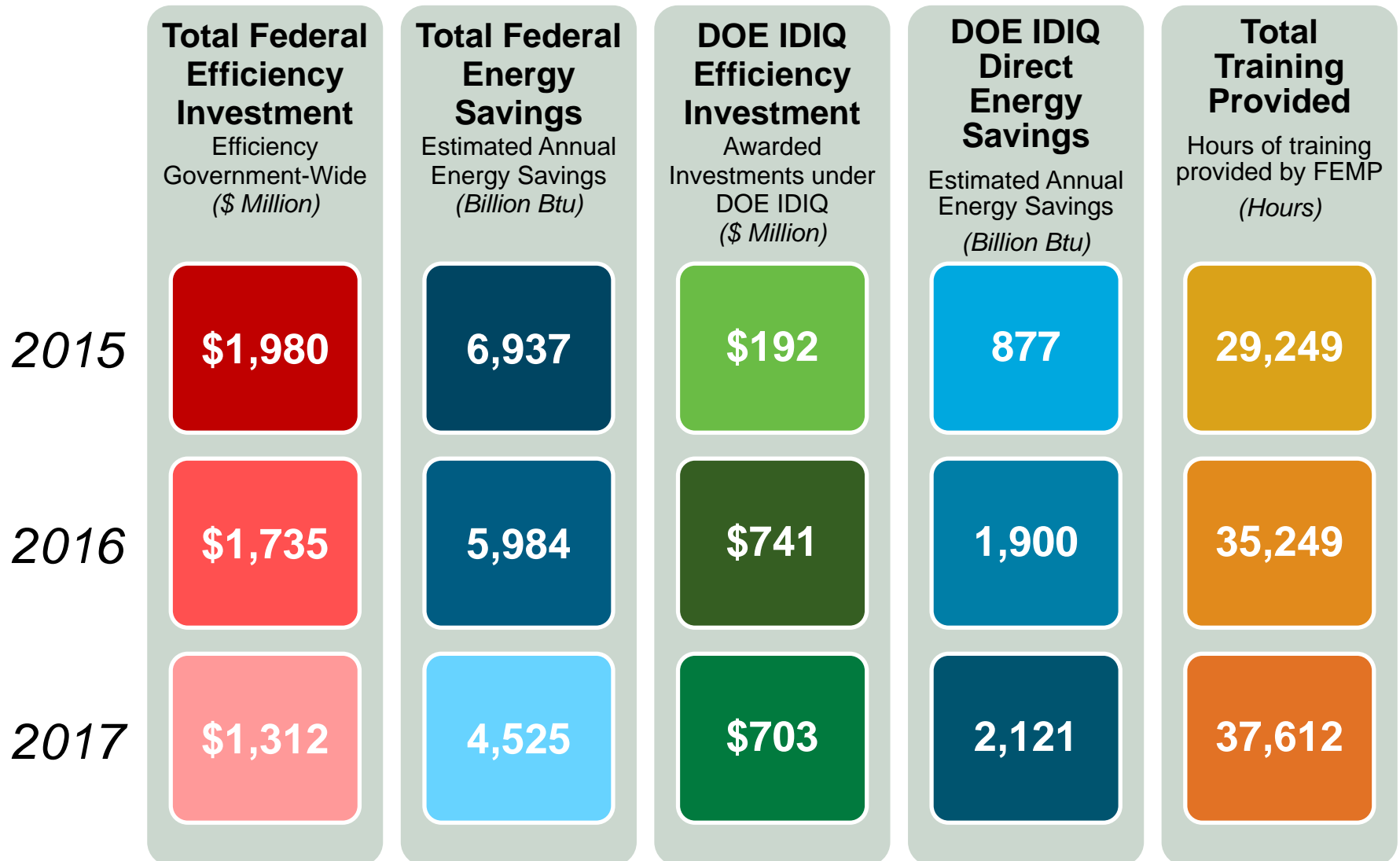
- ***Partnering*** with key stakeholders to develop, test, and replicate systematic enterprise wide approaches to resiliency and energy management for widespread impacts.
- ***Integrating*** strategic energy management that ensures mission priority and supports the Administration's comprehensive energy strategies.
- ***Improving*** the agility, skills and impact of the federal workforce through accredited training and tracking.



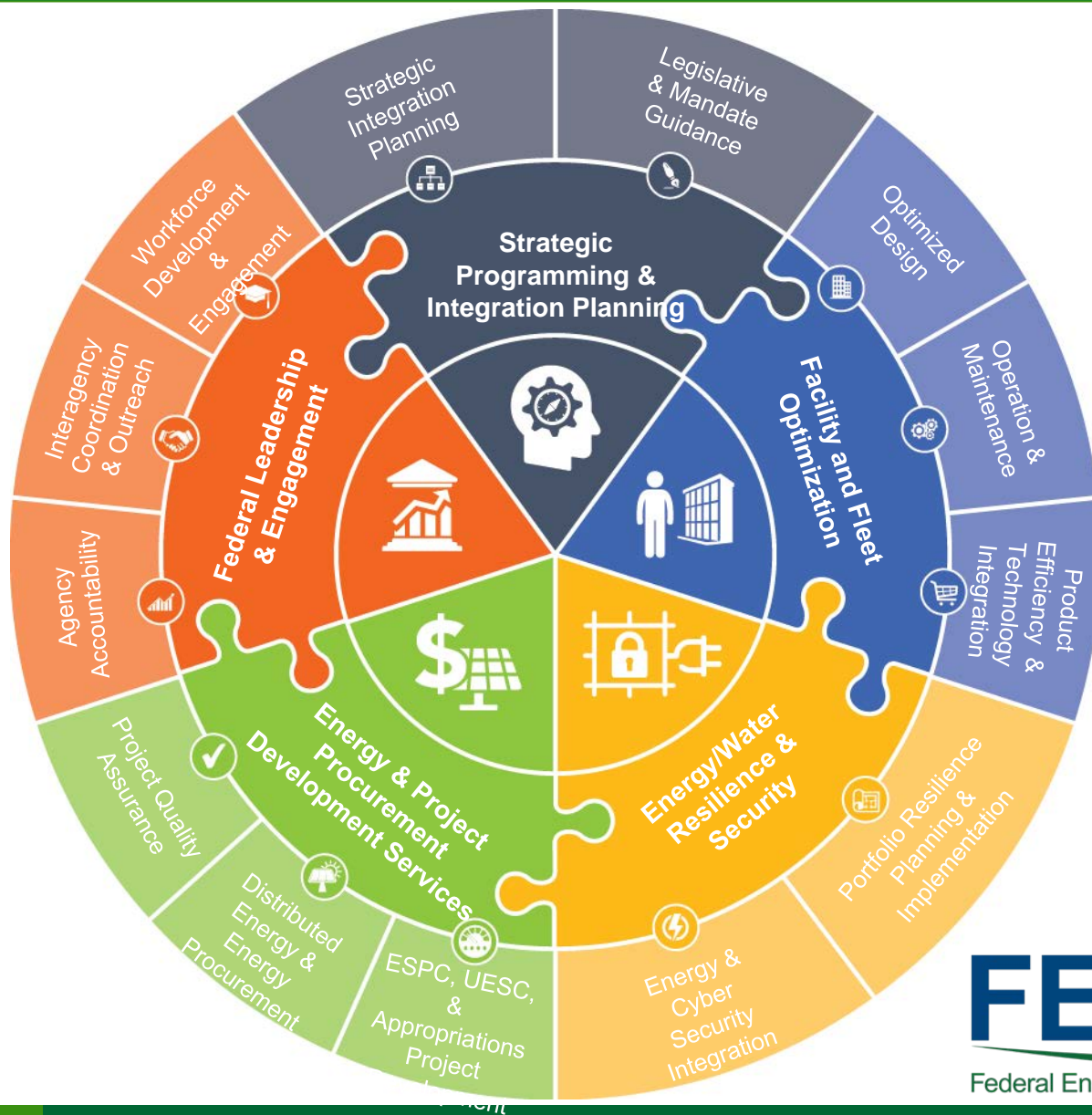
Federal Energy Management Program: *Stakeholders*



FEMP Impacts: *Key Metrics*



Federal Energy Management Program: “Wheelhouse”



Strategic Programming and Integration Planning (SPIP)

FEMP's active presence and programming are designed to react and adapt to the current and changing needs, direction, and priorities of the Agencies.

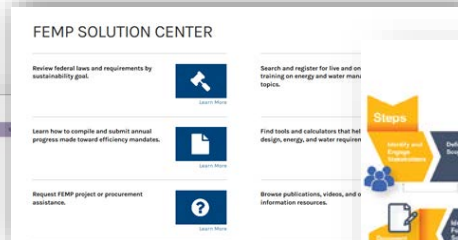
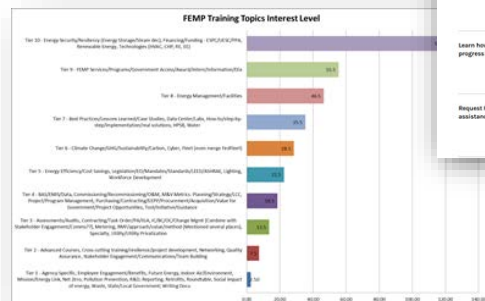
Engage with Agencies to develop critical Agency requirements & needs assessments

Implement prioritization models for projects based on needs, costs, and criticality

Provide FEMP tools, models, and resources available to use and leverage

Assist in integrating projects and process solutions using all funding sources

Replicate affordable and effective project and process solutions across the Government



FFO Program: *FEMP Design/ O&M Tools & Services*

Building Design & Operations

- 10 Tools
- 11 Resources
- **Services:** Provides guidance materials, an implementation plan template, and a best practices guides for Facility Design and Operations

Lighting

- 2 Tools
- 16 Resources
- **Services:** Assists federal agencies with the development of policy addressing high efficiency interior lighting, provides technical assistance to development of lighting documents (e.g., UFGS), and provides targeted agency support.

Water

- 2 Maps
- 15 Resources
- **Services:** Provides agencies with guidance and direction on how to increase water efficiency and reduce water use in federal buildings and campuses.

Product Efficiency

- 18 Tools
- 15 Resources
- **Services:** Assists agencies in with what efficient products to procure and install to meet their requirements, lower energy and water consumption, reduce pollution, and save money.

FEMP Website Solution Center

FEMP SOLUTION CENTER

Review federal laws and requirements by sustainability goal.



[Learn More](#)

Search and register for live and on-demand training on energy and water management topics.



[Learn More](#)

Learn how to compile and submit annual progress made toward efficiency mandates.



[Learn More](#)

Find tools and calculators that help meet design, energy, and water requirements.



[Learn More](#)

Request FEMP project or procurement assistance.



[Learn More](#)

Browse publications, videos, and other information resources.



[Learn More](#)

Features

- Provides “quick links” to most-used pages, tools, and features of FEMP
- Gives access to everything FEMP customers can use on their

Energy and Water Resilience & Security (EWRS)



Develop Comprehensive Approach to Resilience Planning by:

- Developing an organization-wide framework validated with pilot sites
- Developing Business Case to qualitatively and quantitatively prioritize projects
- Documenting verified affordable, replicable best practices and lessons learned

Program Focus Example: FEMP is partnering with DHS, NASA and Army to:

- Test approaches
- Document lessons learned
- Develop replicable, cost effective models for wide-scale adoption

Program Focus Areas:

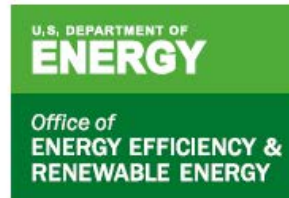
- *Energy and Cybersecurity Integration*
- *Prioritized Systematic Portfolio Planning and Assessments*

EWRS Program: *Facility Related Control Systems*

Security for Facility Related Controls Systems (FRCS)

Facility Cyber Risks and Challenges

- Facility control systems have transitioned over the last three decades from mechanical, to digital, to Internet Protocol (IP)
- Controls and control protocols are largely insecure and have relied on “security through obscurity.”



Cyber-securing
Facility Related
Control Systems

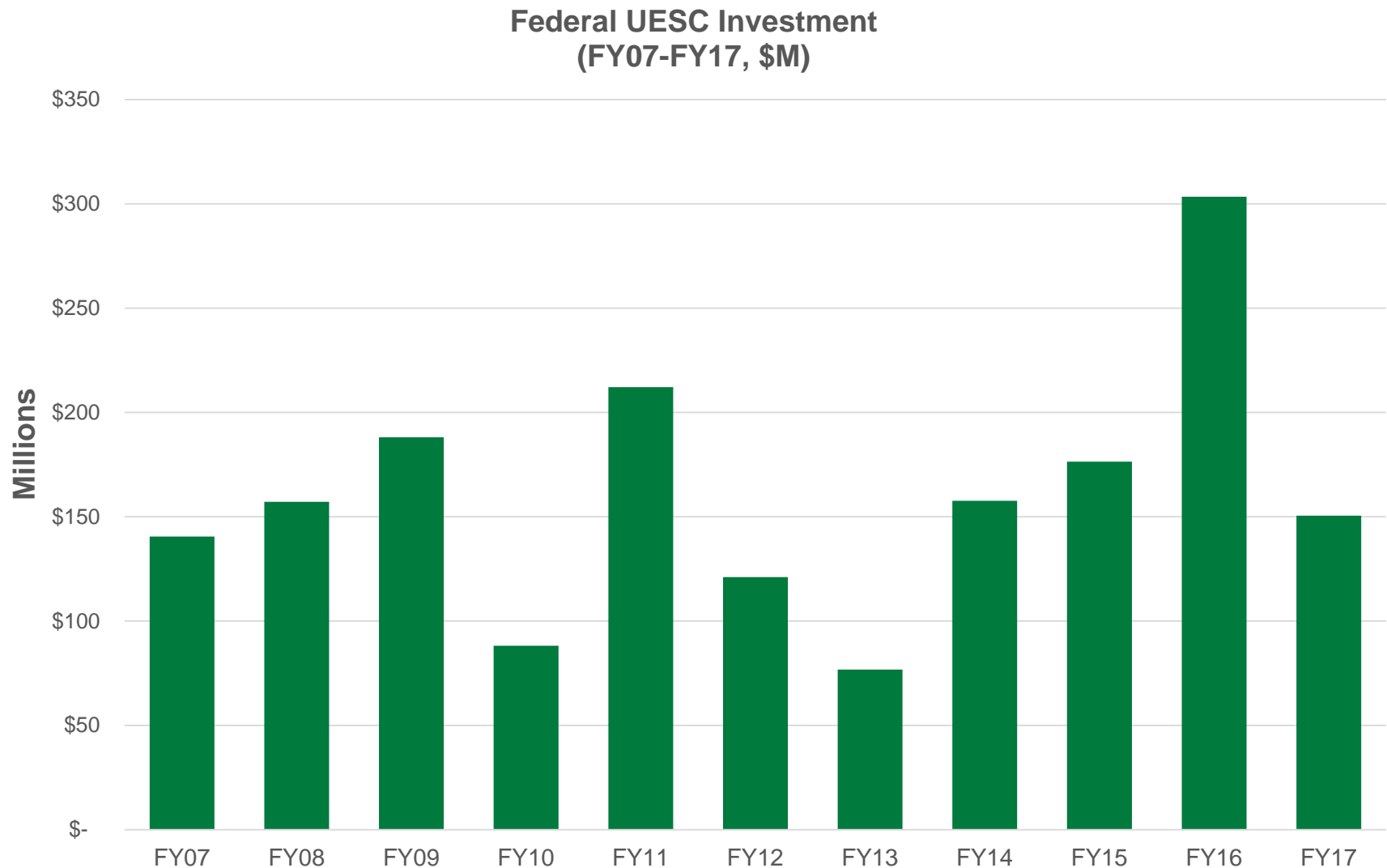


Cyber security attacks can compromise physical systems and equipment. A wide range of actions can be taken to safeguard against cyber threats.
Image Credit: Pacific Northwest National Laboratory

Program Focus Example: FEMP is partnering with GSA to:

- Define the characteristics of a secure system
- Validate and tailor online tools for easy use by facilities staff as assessment and planning tools

Federal UESC Investment



Federal Leadership and Engagement (FLE)

Program Impact Example:

In FY 2017, FEMP offered 142 courses, workshops, and webinars sessions; plus, 135 Energy Exchange sessions, for a total of 277 training sessions

FEMP Training Hours Provided in FY17



FEDERAL
award winners

37 YEARS
1,300+ WINNERS



Together, these
winners have
saved more than
930 trillion

LIFECYCLE
Btu



which is almost
enough energy to
power *all* federal
facilities for

3 YEARS



The Federal Energy and Water Management Awards honor outstanding achievements in:

1. Energy and water efficiency and conservation
2. Renewable energy implementation
3. Sustainable practices for high-performance buildings.
4. Fleet and transportation management.

Program Focus Areas:

- *Federal Workforce Development and Engagement*
- *Federal Interagency Coordination*
- *Agency Leadership and Accountability*

2018 Energy Exchange AND Better Buildings Summit

U.S. DEPARTMENT OF ENERGY
invites you



Resilient • Efficient • Secure

SAVE THE DATE

**AUGUST 21-23,
2018**

CLEVELAND, OHIO



@BetterBldgsDOE

#EnergyExchange2018

#BBSummit2018

U.S. DEPARTMENT OF
ENERGY



Talk to Us and Talk to Each
Other